

Reza Mahjourian

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EDUCATION

UNIV. OF TEXAS AT AUSTIN

PHD IN COMPUTER SCIENCE
2018 | GPA: 4.0

UNIVERSITY OF FLORIDA

MS IN COMPUTER SCIENCE
2008 | Gainesville, FL | GPA: 4.0

SHARIF UNIV. OF TECH.

BS IN COMPUTER ENG.
2002 | Tehran, Iran

SKILLS

A.I. RESEARCH

Deep Learning • Computer Vision •
Reinforcement Learning • Evolutionary
Strategies • Robotics

SOFTWARE ENGINEERING

Programming:
Python • TensorFlow • C++ • Lua
Databases:
PostgreSQL, PL/pgSQL
Linux:
Bash Programming • Sed • AWK.
Design Documents

OPEN SOURCE

XPage : Light-weight web framework,
transforms high-level page specs in XML
to server-side scripts using XSLT. **2002**
GameGraph : Study impact of domain
stochasticity and ergodicity on RL. **2011**
Discovery : Evolutionary feature
discovery for RL. **2011**
OpenNERO : Platform for A.I. research
and education (contributor). **2014**
Master-Worker : C++ Python :
Library for coordinating cluster workers
through a shared file system. **2016**

HOBBY PROJECTS

SharifNET : Community website with
custom-developed message board for
Sharif University students. **1999**
Logestan : RSS feed aggregator. **2004**

EXPERIENCE

WAYMO | SENIOR RESEARCH SCIENTIST

Jul 2019 - present | Mountain View, CA

- Working on perception and behavior prediction models for self-driving cars.

GOOGLE BRAIN ROBOTICS | STUDENT RESEARCHER

Sep 2017 - Nov 2018 | Mountain View, CA

- Sample-efficient reinforcement learning of robot table tennis with self-play in a VR environment. **Paper** , **Website**
- Unsupervised learning of object depth and motion from raw monocular videos. **AAAI 2019 Paper** , **Website** , **Google AI Blog** , patent application.
- Future semantic segmentation using 3D structure. **ECCV 2018 3D Reconstruction meets Semantics Workshop Paper** , patent application.
- Published the **Bike Video dataset**
- Received peer bonus for collaboration with secondary team.
- Added SSIM and PSNR library functions to **TensorFlow**

GOOGLE BRAIN ROBOTICS | RESEARCH INTERN

May 2017 - Aug 2017 | Mountain View, CA

- Developed a novel method for unsupervised learning of depth and ego-motion from monocular videos. **Website** , patent application.
- Developed custom TensorFlow op for aligning 3D point clouds during training.
- CVPR 2018 Paper** , **Website** .
- ICRA 2018 Workshop on Representing a Complex World Paper** .

GOOGLE BRAIN | RESEARCH INTERN

May 2016 - Aug 2016 | Mountain View, CA

- Worked on next-frame prediction in video.
- IEEE Intelligent Vehicles Symposium 2017 Paper** , patent application.

GOOGLE | SOFTWARE ENGINEERING INTERN

Jun 2015 - Aug 2015 | Mountain View, CA

- Created a sparse-feature deep learning model for Google's ad publishing platform using DistBelief. Improved performance by 1.38% over existing model.
- Created a framework for managing experiments with different model variants.
- Added support for ColumnIO files to DistBelief (now TensorFlow).

TEAMUP | START-UP LEAD DEVELOPER

Jul 2009 - Dec 2009 | London, UK

- Created a Django web app for managing fitness and sports businesses.
- Led the project from inception to alpha release.

UF COLLEGE OF EDUCATION | PART-TIME SOFTWARE DEVELOPER

Jul 2008 - Aug 2008 | Gainesville, FL

- Created a web app for teachers to monitor progress of special students (used XPage).

FLORIDA MUSEUM OF NATURAL HISTORY | SOFTWARE DEVELOPER

Jun 2006 - Aug 2007 | Gainesville, FL

- Created two web apps for managing the specimen in the Lepidoptera (butterflies) and fish research collections (used XPage).

TELEMEDIA | SOFTWARE ENGINEER

Sep 2004 - Dec 2005 | Paris, France

- Created a web app for KDDI (network operator in France) enabling partners to query their call data records (used XPage).
- Created a PostgreSQL database pooling call detail records from telecom devices. Optimized the database design and server for fast queries.
- Developed a Python backend to receive and fulfill orders for mobile content from web services or the GPRS network over SMPP.

VEESTA WORLD CO | SOFTWARE ENGINEER

Sep 2003 - Sep 2004 | Tehran, Iran

- Implemented a SCADA communication protocol for an industrial RTU, running on the PSOS real-time OS. RTUs were deployed in a system monitoring the national power network.

SCIENCE AND ARTS FOUNDATION (NON-PROFIT) | SOFTWARE DEVELOPER, SYSTEM ADMIN

Aug 1999 - Aug 2003 | Tehran, Iran

This organization was based in Sharif University of Technology's Computing Center. It donated computers and Internet access to model schools in underprivileged areas.

- Managed Linux servers for a network of about a 100 schools connected to Sharif University.
- Created a website offering educational content and services to students.
- Facilitated participation of students in collaborative projects. Talks: "The Experiences of iEARN in Iran", Osaka, Japan, 2003. "How to Make a School Intranet Using Free and Open-Source Software", Moscow, Russia, 2002. "The Activities of Science and Arts Foundation in Iran", Cape Town, South Africa, 2001.

FREELANCE SOFTWARE DEVELOPER

2001 - 2002 | TakTaz Motor - Motorcycle Manufacturer, Tehran, Iran

- Created a web app and an Oracle database enabling the sales office, factory, and dealers to collaboratively manage inventory, wholesale orders, shipments, and registration documents.

1998 - 1999 | Kaveh Khodro - Automaker, Tehran, Iran

- Created a FoxPro application for managing and monitoring the flow of deliveries from suppliers.

1997

- Developed a multiple-choice test evaluation package in FoxPro, offering reports on student performance and progress over time.

IDEH-NEGAR SOFTWARE | SOFTWARE DEVELOPER

Dec 1995 - Apr 1997 | Tehran, Iran

- Programmed custom FoxPro database applications for company clients.
- Created a FoxPro app for managing the company's CD rental business.
- Created a computer telephony app answering user queries over the phone.
- Programmed a C library for visualizing metrics in a neural OCR program.

AWARDS

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|------|-------------------------------------|-----------------------------------|
| 2008 | Provost Fellowship | University of Southern California |
| 2007 | Outstanding Academic Accomplishment | University of Florida |
| 2002 | 98 th percentile | Computer Science GRE Test |
| 1995 | Outstanding Student Award | Sharif University of Technology |
| 1995 | 78 th /400k | National college entrance exams |
| 1994 | National | Iranian Informatics Olympiad |